

Name: \_\_\_\_\_

**at1124exam: Radicals and Squares (v820)**

**Question 1**

Simplify the radical expressions.

$$\sqrt{44}$$

$$\sqrt{18}$$

$$\sqrt{63}$$

**Question 2**

Find all solutions to the equation below:

$$10((x - 10)^2 - 8) = 80$$

**Question 3**

By completing the square, find both solutions to the given equation. *You must show work for full credit!*

$$x^2 + 10x = 56$$

**Question 4**

A quadratic polynomial function is shown below in standard form.

$$y = 3x^2 + 24x + 39$$

Express the function in **vertex form** and identify the **location** of the vertex.